Research Integrity and its Process of Universities and Institutes in Japan

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3rd June 2015
Rio de Janeiro, BRAZIL
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Current Research Integrity and its Challenge

Toho University Research Misconduct (March 2012)

Singapore Statement (July 2010)

Diovan Incident (July 2013)

SCJ Revised Code of Conduct (January 2013)

GRC Berlin Statement (May 2013)

Montreal Statement (May 2013)

STAP-cell Research Misconduct (December 2014)

MEXT Revised Guidelines (August 2014)

JSPS Published a text book for Research Integrity (March 2015)
Singapore Statement on Research Integrity (SSRI)
(22nd September 2010)
<The 2nd World Conference on Research Integrity>

Principles

Honesty in all aspects of research
Accountability in the conduct of research
Professional courtesy and fairness in working with others
Good stewardship of research on behalf of others

1. Integrity
2. Adherence to Regulations
3. Research Methods
4. Research Records
5. Research Findings
6. Authorship
7. Publication
   Acknowledgement
8. Peer Review
9. Conflict of Interest
10. Public Communication
11. Reporting Irresponsible Research Practices
12. Responding to Irresponsible Research Practices
13. Research Environments
14. Societal Considerations
Montreal Statement on Research Integrity  
(5th -8th May 2013)  
<The 3rd World Conference on Research Integrity>  

Responsibilities of Individual and Institutional Partners in Cross-Boundary Research Collaborations  

1. Integrity  
2. Trust  
3. Purpose  
4. Goals  
5. Communication  
6. Agreements  
7. Compliance with Laws, Policies and Regulations  
8. Costs and Rewards  
9. Transparency  
10. Resource Management  
11. Monitoring  
12. Roles and Responsibilities  
13. Customary Practices and Assumptions  
14. Conflict  
15. Authority of Representation  
17. Publication  
18. Authorship and Acknowledgement  
19. Responding to Irresponsible Research Practices  
20. Accountability
Statement of Principles for Research Integrity

Preamble
The Responsible Conduct of Research is at the very essence of the scientific enterprise and is intrinsic to society’s trust in science. Within the framework of the Responsible Conduct of Research, the basic principles of Research Integrity - namely honesty, responsibility, fairness and accountability – are enshrined in foundational documents ¹ that also describe the responsibilities of researchers and the scientific community.

While researchers and institutions themselves remain ultimately responsible for undertaking research with integrity, research funding agencies have an obligation to ensure that the research they support is conducted in accordance with the highest standards possible. To that end, participants in the 2nd Annual Meeting of the Global Research Council recognize the following Principles to articulate the responsibilities of research funding agencies in creating an international environment in which research integrity is at the core of all activities.

Principles

Leadership
Research funding agencies must lead by example in the responsible management of research programs.

Promotion
Research funding agencies should encourage institutions to develop and implement policies and systems to promote integrity in all aspects of the research enterprise.

Education
Research funding agencies should promote continual training in research integrity, and develop initiatives to educate all researchers and students on the importance of research integrity.

Transparent Processes
Research funding agencies should, within the scope of their mandate, publish policies and procedures to promote research integrity and to address allegations of research misconduct.

Response to Allegations of Misconduct
During any investigation of misconduct ², research funding agencies should support a process that values accountability, timeliness and fairness.

Conditions for Research Support
Research funding agencies should incorporate integrity in research as a condition for obtaining and maintaining funding by researchers and institutions.

International Cooperation
Research funding agencies will work cooperatively with partners to support and facilitate research integrity worldwide.

¹ For example: the Singapore Statement, the Inter Academy Council IAP Policy Report, and the European Code of Conduct for Research Integrity.
² Breaches of research integrity can include, but are not limited to, plagiarism, fabrication and falsification.
Revised Version  
“Code of conduct for scientists”  
(Revised in January 2013)  
(Science Council of Japan)(SCJ)

I. Responsibilities of Scientists
   1. Basic Responsibilities of Scientists
   2. Attitude of Scientists
   3. Scientists in Society
   4. Dual Use of Scientific Research Outcomes

II. Research Integrity
   5. Research Activities
   6. Establishing Sound Research Environments and Thorough Educational Enlightenment
   7. Consideration for Research Subjects

III. Science in Society
   8. Dialogue with Society
   9. Scientific Advice

IV. Legal Compliance
   10. Compliance with Laws and Regulations
   11. Rejection of Discrimination
“Code of conduct for scientists” (Cont’d)

Point of the Revised Version (SCJ)

(Fabrication, Falsification, and Plagiarism)
Adding the following articles to “I. Responsibilities of Scientists”
2. Attitude of Scientists
3. Scientists in Society

(Educational Enlightenment)
Adding “Thorough Educational Enlightenment” (II. Research Integrity)
6. Establishing Sound Research Environments and Thorough Educational Enlightenment

(Dual Use)
Adding the following articles to “I. Responsibilities of Scientists”
4. Dual Use of Scientific Research Outcomes

(Authorship)
Adding the following sentence to “7. Research Activities” of “II. Research Integrity,”
5. Research Activities
By reporting their research results through such means as papers, scientists shall take responsibility as well as obtaining recognition for their achievements in accordance with the role that they played.
Governance of Research Integrity in Japan

- MEXT “Guidelines for Responses to Research Misconduct Pertaining to Research Supported by Competitive Funding” (August 2006)
  - Specify principles for responding appropriately to research misconduct in research supported by competitive funding
  - Urge universities, research institutions and funding agencies to develop appropriate arrangements for responding appropriately to research misconduct
  - Scope of “Misconduct”: Fabrication, falsification and plagiarism of data or research results appearing in published research results
  - Guidelines:
    i. Receiving Allegations and other information
    ii. Investigation of Allegations and Other Information
    iii. Measures Applicable to Informants and Subjects of Allegations
    iv. Actions by Funding Institutions Against Persons Culpable of Misconduct
Background
- MEXT has been taking necessary measures regarding research institutions (including universities; the same applies hereafter) in accordance with the “Guidelines for Responding to Misconduct in Research” (August 2006, Special Committee on Misconduct in Research Activities, Council for Science and Technology).
- However, as cases of misconduct in research activities continue to happen, the guidelines were reviewed based on a summary of the “Task Force on Misconduct in Research and Misuse of Research Funds” (September 2013) and a summary of discussions of “Panel of Experts on the Revision and the Improvement of Implementation of the Guidelines for Responding to Misconduct in Research” (February 2014).

Basic Direction of the Review
- New guidelines are to be established, with the approval of the Minister of Education, Culture, Sports, Science and Technology.
- Whereas individual researchers have traditionally been held accountable for taking measures against misconduct in research activities, research institutions are now responsible for taking part in preventing misconduct, making measures more robust.
Research Environment

NHK has been broadcasting, and guest appearances on the show, “Today’s Close-Up” to dig deep and current news background. He described how to stop successive research misconduct case such as STAP cell problem. (10th March, 2015 on air)

http://www.nhk.or.jp/gendai/kiroku/detail_3628.html
Research Environment

Bottom Up  Mission Oriented

Different Approaches but…

Idea of Research Integrity is Common in the World
Changes in Research Environment
(Social Trends)

Results of the Scientific Research for the Growth of Society

Promote Scientific Technology for National Policy

“Statement of Principles for Funding for Scientific Breakthrough”
(GRC 28th May 2015)
“Prescription to be Implemented”

- Phenomenal growth of the scientific technology (Lights and shadow of Science)
  - Genome editing, gene recombination, dual-use…
    → Basic concepts varies across the ages and countries…

  Update regulations and knowledge

- Elongate worldwide collaborative research
  → Recognize and share differences in background

- Mobilization and Increasing number of part-time employee
  Minimal acquaintanceship
  → Document unspoken rules
“Prescription to be Implemented”

Change in Landscape of Science in Society

Not always corresponding well

Insufficient Education  Lack of Trust to Science

Lack of Information
"Green Book" is to resolve these issues

Enacting severe guidelines and code of conduct

By discouraging researcher’s creativity/
losing motivation toward research

Will lead to adverse impact

JSPS Compiled fundamental knowledge that researchers must know in implementing the research
For the Sound Development of Science
—The Attitude of a Conscientious Scientist—

June 2015
in store!!

《Contents》
Section I : What Is a Responsible Research Activity?
Section II : Planning Research
Section III : Conducting Research
Section IV : Presenting Research Results
Section V : How to Conduct Joint Research
Section VI : Appropriate Use of Research Funds
Section VII : Contributing to Quality Improvement in Scientific Research
Section VIII: For the Progress of Society

MARUZEN PUBLISHING
Section I  What Is a Responsible Research Activity?

Section II  Planning Research

1. Value and Responsibility of Research
   • Purpose of the research
   • Appropriateness of research
   • Shared objectives in joint research

2. Freedom in Research and What Is to Be Protected
   • What is to be protected
   • What is to be protected in research with human subjects
   • Safety consideration in the research environment

3. Measures to Avoid Conflicts of Interest

4. Security Consideration
   • Security Export Control of Subtleties and Other Technologies
   • Dual-Use Issues

5. Compliance with Laws and Regulations
Section Ⅲ Conducting Research

1. Informed Consent
   • Concept and necessity of informed consent
   • Components and procedures of informed consent

2. Protecting Personal Information
   • Definition of “Personal Information”
   • Linkable anonymizing and non-linkable anonymizing
   • Scientists’ responsibility for personal information in conducting research
   • Handling personal information in the humanities and social sciences
Section III  Conducting Research

3. Collecting, Managing, and Processing Data

- Data and their importance
- Purposes of lab notes
- What makes the best lab notes
- Lab Notes: Items to record, methods of recording
- Managing lab notes (Data)

"Research Lab Notebook" developed jointly by Prof. Yoichiro Sada of Yamaguchi University and Kokuyo S & T Co. Ltd., a Japanese stationery manufacturer. Here is an example of an entry in it.
Section III  Conducting Research

4. What Is Research Misconduct?

- Definition of research misconduct
- Examples of fabrication and falsification
- Examples of plagiarism
- Citing sources

5. Avoiding Questionable Research Practices

Honest research  Questionable research practices  Research misconduct

(ideal conduct)  (bad conduct)

6. Duty of Confidentiality

7. Responsibilities of the Principal Investigator
Section IV  Presenting Research Results

1. Presentation of Research Results
   - Importance of presenting research results
   - Announcement using mass media

2. Authorship
   - Responsible presentation
   - Credit for research results
   - Authorship and responsibilities
   - Who should be listed as authors
   - List of authors

3. Improper Authorship
   - Gift authorship
   - Ghost authorship
Section IV Presenting Research Results

4. Improper Presentation Methods
   • Duplicate posting, duplicate publication
   • “Salami Slicing” in publishing
   • Improper referencing of prior research
   • Acknowledgements

5. Copyright
   • What Is a copyright?
   • When using someone else’s copyrighted material
   • Secondary use when no permission of the copyright owner is necessary
Section V  How to Conduct Joint Research

1. Rise in Joint Research and Background

2. Challenges in International Joint Research

3. Points to Remember in Joint Research

4. Positions regarding Graduate Students and Joint Research
Section VI  Appropriate Use of Research Funds

1. Responsibilities of the Scientist
   • Understanding rules concerning the use of public research funds
   • Cooperation to ensure proper use of research funds by research institutions
   • How to process private subsidies

2. Examples of Improper Use of Public Research Funds
   Example 1  Impropriety through fictitious orders and deposit
   Example 2  Impropriety through fictitious labor costs (honoraria)
   Example 3  Impropriety through fictitious travel and transportation expenses

3. Measures Taken against Improper Use of Public Research Funds
   • Return of public research funds connected to improper use
   • Limitations on eligibility to apply for competitive funding
   • Disciplinary actions within research institutions
   • Miscellaneous
Section VII Contributing to Quality Improvement in Scientific Research

1. Peer Review
   - Role of peer review
   - Peer review of research papers and research grant applications
   - Role and responsibilities of the reviewer
   - Challenges in peer review

2. Guiding Younger Generations
   - Teaching responsibilities as mentors
   - Guiding doctoral students and reviewing their dissertations responsibly

3. Ways to Prevent Research Misconduct
   - Roles of policies, guidelines, etc.
   - Roles of academic and professional associations
   - Roles of research institutions
Section VII Contributing to Quality Improvement in Scientific Research

4. Importance of Ethics Education in Research
   • Professional and occupational ethics
   • Ethics education in research on the rise

5. Prevention of Research Misconduct and Whistleblowing
   • Importance of reporting misconduct
   • Protection of whistleblowers

Section VIII For the Progress of Society

1. Role of Scientists

2. Dialogue between Scientists and Society

3. Scientists and Professionalism
Conditioning this program as a prerequisite for all scientists. (Scheduled)

For the Sound Development of Science
—The Attitude of a Conscientious Scientist—

Japan Society for the Promotion of Science

e-Learning

Under preparation to be completed in April 2016!!

MARUZEN PUBLISHING
Conclusion
—JSPS’s effort in enhancing the recognition of research integrity common in the world based on mutual trust—

◇ In Japan
Established Advisory Meeting for Promotion of Research Integrity
(17th April 2015 by MEXT Chair: Makoto Asashima)
  - Monitoring the situation at each university toward research integrity
  - Confirmation and review of contents of research ethics education

◇ With our partners overseas
With NSF (USA) 2014
With DFG (German) 2015

Towards the idea of research integrity common in the world
JSPS supports enhancing research integrity in open and free environment

ありがとうございました  Thank You  Gracias